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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,290	07/09/2003	Parama Jyothi Reddappagari		1289

7590	09/22/2006	

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EXAMINER
ROCHE, TRENTON J

ART UNIT	PAPER NUMBER
2193	

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 July 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This Office action is responsive to communications filed 9 July 2003.

2.   Claims 1-47 are currently pending.

Claim Objections

3.   Claims 1-47 are objected to as being improperly written. Note the MPEP section cited

below:

> **608.01(m) [R-3]   Form of Claims**
> The claim or claims must commence on a separate physical sheet or electronic page and
> should appear after the detailed description of the invention. Any sheet including a claim or
> portion of a claim may not contain any other parts of the application or other material.
> While there is no set statutory form for claims, the present Office practice is to insist that
> each claim must be the object of a sentence starting with "I (or we) claim," "The invention
> claimed is" (or the equivalent). If, at the time of allowance, the quoted terminology is not
> present, it is inserted by the Office of Patent Publication. **Each claim begins with a
> capital letter and ends with a period. Periods may not be used elsewhere in the
> claims except for abbreviations. See Fressola v. Manbeck, 36 USPQ2d 1211 (D.D.C.
> 1995).** Where a claim sets forth a plurality of elements or steps, each element or step of the
> claim should be separated by a line indentation, 37 CFR 1.75(i).

4.   A large majority of the claims have multiple sentences in the claim, and as noted above is not

proper. It is requested that Applicant amend the claims such that each claim is one sentence,

utilizing commas and semicolons where appropriate.

5.   Claims 7-11, 13-16, 18, 20-31 and 33-47 are objected to under 37 CFR 1.75(c) as being in

improper form because a multiple dependent claim should refer to other claims in the

alternative only and cannot depend from any other multiple dependent claims. See MPEP

§ 608.01(n). Accordingly, the claims have not been further treated on the merits.

6.   Finally, claim 19 makes reference to the detailed description section of the specification.

Such inclusion in the claim is improper and ultimately unnecessary, as any claim element is initially

assumed prior to examination to have proper support and definition in the specification. Paragraph

0044 of the specification provides support for abstract values, and as such, the Examiner requests

that the reference to the specification be removed from the claim language.

Claim Rejections - 35 USC § 112

7.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject
> matter which the applicant regards as his invention.

8.   Claims 1-47 are rejected as failing to define the invention in the manner required by 35

U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational

language. The structure which goes to make up the device must be clearly and positively stated.

The structure must be organized and correlated in such a manner as to present a complete operative

device. The claim(s) must be in one sentence form only. Note the format of the claims in the

patent(s) cited. As many of the claims are problematic, a small number of exemplary claims will be

addressed, and the Applicant is requested to analyze all claims for similar issues.

9.   Claim 1 recites the limitation "the task" in lines 4 and 5. There is insufficient antecedent

basis for this limitation in the claim. The claim does not set forth what is represented by "the task"

and as such is indefinite and the scope of the claim cannot be reasonably ascertained. Claims 2-47

are therefore also rejected as being dependent on claim 1. For purposes of examination, the claim

will be interpreted to read "a task" in lines 4 and 5. Further examples of claim language lacking

antecedent basis is reference to "the program" in claim 1, line 2 (no program is previously set forth

in the claim, accordingly, it should be referred to as "a program"), and "The syntactical additions"

in claim 2, line 2 (similarly, no syntactical additions were ever presented prior to reference to "The

syntactical additions," accordingly, they should be referred to as simple "Syntactical additions."). The

Examiner requests that the Applicant review all claims for similar antecedent basis issues, and

correct those in error.

10.   Additionally, claim 1 discloses a computer-implemented system, and sets forth that the

system is referred to as SpecProc. This SpecProc system is then said to consist of an apparatus, and

in claim 2, the apparatus is said to consist of a SpecProc apparatus. As such, the scope of the claim is

indefinite, as the claims essentially are stating that a system (SpecProc) includes an apparatus, which

in turn includes the system (SpecProc). The language of the claim does not specifically indicate

whether there are multiple systems and apparatuses or simply one system/apparatus, and

furthermore utilizes the name "SpecProc" for two separate things: a system and an apparatus.

Accordingly, the claims are highly indefinite and the scope of the claims cannot be reasonably

ascertained.

Claim Rejections - 35 USC § 102

11.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless —
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12.   Claims 1-6, 12, 17, 19 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S.

Patent 6,289,502 to Garland et al. (hereinafter referred to as "Garland").

Per claim 1:

Garland discloses:

- a computer-implemented system for generating and verifying a program adhering to given

    specifications ("to validate and to generate code for a distributed system…using multiple

    related system specifications…" in col. 2 lines 10-13)

substantially as claimed. The specific name of "SpecProc" is merely a naming convention and lends

nothing towards patentability and, accordingly, is not given any patentable weight.

Per claim 2:

The rejection of claim 1 is incorporated, and further, Garland discloses syntactical additions made to

the program as claimed ("…high level programming language implementation must in general be

compiled into machine instructions for the target processor before execution…" in col. 8 lines 39-

42. The high level source code contains syntactical additions by the programmer.)

Per claim 3:

The rejection of claim 2 is incorporated, and further, Garland discloses usual programming language

syntax modified to allow embedding of assertion statements as claimed ("…specification expressed

as logical statements (i.e., assertions or predicates…" in col. 7 lines 50-51)

Per claim 4:

The rejection of claim 3 is incorporated, and further, Garland discloses logical function definitions

and logical predicate definitions as claimed (Note the rejection regarding claim 3.)

Per claim 5:

The rejection of claim 3 is incorporated, and further, Garland discloses embedded code statements, set of logical formulas, and state transformer assertions as claimed ("...specification expressed as logical statements (i.e., assertions or predicates that should be true in all states..." in col. 7 lines 50-52)

Per claim 6:

The rejection of claim 2 is incorporated, and further, Garland discloses libraries, parsers, semantic analyzers and assertion validators, a logic engine, and an emitter as claimed ("library specification..." in col. 8 line 46. Further, "high level programming language implementation must...be compiled..." in col. 8 lines 39-40. A parser, semantic analyzer and emitter are inherently part of the compilation process. Further still, "Validation tools..." in col. 8 line 56. Finally, as the logical statements noted in claim 3 are processed, there must be a logic engine with the system.)

Per claim 12:

The rejection of claim 3 is incorporated, and further, Garland discloses a parse tree as claimed (Note the rejection regarding claim 2. A parse tree is inherently created during compilation.)

Per claim 17:

The rejection of claim 5 is incorporated, and further, Garland discloses logical formulas in assertion statements as nodes and code statements as edges as claimed (Note the rejection regarding claim 5, and further, note Figure 3 and the corresponding sections of the disclosure.)

Per claim 19:

The rejection of claim 17 is incorporated, and further, Garland discloses abstract values as claimed ("an abstract specification..." in col. 20 line 63)

Per claim 32:

The rejection of claim 6 is incorporated, and further, Garland discloses a facility for showing errors as claimed ("provides information related to the simulated execution that lead up to the error" in col. 17 lines 25-26)

Pro Se Assistance

13.   An examination of this application reveals that Applicant is unfamiliar with patent prosecution procedure. While an inventor may prosecute the application, lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

A listing of registered patent attorneys and agents is available on the USPTO Internet web site http://www.uspto.gov in the Site Index under "Attorney and Agent Roster." Applicants may also obtain a list of registered patent attorneys and agents located in their area by writing to the Mail Stop OED, Director of the U. S. Patent and Trademark Office, PO Box 1450, Alexandria, VA 22313-1450

14. However, should Applicant decide to not secure the services of a registered practitioner, the

Examiner directs Applicant's attention to an exemplary claim in Garland:

    1. A method for developing a software implementation of a distributed
system, comprising:
      accepting a design specification for the distributed system, including
      accepting specifications of a plurality of interacting asynchronous state
machines, wherein at least some of the state machines exhibit non-deterministic
behavior, and
      accepting a specification of desired properties of the distributed system,
including accepting a logical property that is desired to be satisfied in any
state of the state machines that can be reached during execution of the
distributed system;
      applying a validation procedure to the design specification to verify that
the distributed system has the desired properties, including
      applying a theorem proving procedure to the design specification, including
proving that the logical property is satisfied; and
      applying a code generating procedure to the specifications of one or more of
the state machines to generate software implementations for components of the
distributed system.

As can be seen above, the format of the claim is limited to one sentence, utilizing commas and

semicolons to outline various steps and procedures performed by the system. Additionally, note that

the first presentation of "a distributed system" appears in lines 1 and 2 of the claim, and subsequent

referrals are made to "the distributed system," thereby fulfilled all antecedent basis requirements.

For further examples, note the claims and format of the additional cited references.

15. Finally, regarding the improper multiple dependent claims, note MPEP 608.01(n) which

states:

    608.01(n) [R-3]   Dependent Claims
    I. MULTIPLE DEPENDENT CLAIMS

37 CFR 1.75. Claim(s).
*****
**>
(c)   One or more claims may be presented in dependent form, referring back to and further
limiting another claim or claims in the same application. Any dependent claim which refers to more
than one other claim ("multiple dependent claim ") shall refer to such other claims in the alternative
only. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim.
For fee calculation purposes under § 1.16, a multiple dependent claim will be considered to be that
number of claims to which direct reference is made therein. For fee calculation purposes also, any
claim depending from a multiple dependent claim will be considered to be that number of claims to
which direct reference is made in that multiple dependent claim. In addition to the other filing fees,
any original application which is filed with, or is amended to include, multiple dependent claims must
have paid therein the fee set forth in § 1.16(j). Claims in dependent form shall be construed to
include
all the limitations of the claim incorporated by reference into the dependent claim. A multiple
dependent claim shall be construed to incorporate by reference all the limitations of each of the
particular claims in relation to which it is being considered.<
*****
**Generally, a multiple dependent claim is a dependent claim which refers back in the
alternative to more than one preceding independent or dependent claim.
The second paragraph of 35 U.S.C. 112 has been revised in view of the multiple
dependent claim practice introduced by the Patent Cooperation Treaty. Thus 35 U.S.C.
112 authorizes multiple dependent claims in applications filed on and after January 24,
1978, as long as they are in the alternative form (e.g., "A machine according to claims 3
or 4, further comprising ---"). Cumulative claiming (e.g., "A machine according to claims 3
and 4, further comprising ---") is not permitted. A multiple dependent claim may refer in
the alternative to only one set of claims. A claim such as "A device as in claims 1, 2, 3, or
4, made by a process of claims 5, 6, 7, or 8" is improper. 35 U.S.C. 112 allows reference
to only a particular claim. Furthermore, a multiple dependent claim may not serve as a
basis for any other multiple dependent claim, either directly or indirectly. These limitations
help to avoid undue confusion in determining how many prior claims are actually referred
to in a multiple dependent claim.**

As such, claims 7-11, 13-16, 18, 20-31 and 33-47 should be amended in accordance with MPEP

608.01(n).

Conclusion

16.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Trenton J. Roche whose telephone number is (571) 272-3733. The examiner

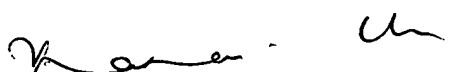can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Trenton J Roche
Examiner
Art Unit 2193

TJR

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